

## FINAL PERFORMANCE REPORT

**2013-2014**

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This is a final report from Bread for the City reporting on USDA Specialty Grant, SCBGP-FB, 12-25-B-1258, with a grant period from October 1, 2011 to September 30, 2014.

## **Project Title: City Orchard**

### **Project Summary:**

#### **Need Addressed:**

Poverty is a critical issue in the District of Columbia, where the rate of those living at or below the federal poverty line rose to over 19% in 2011—and if the high cost of living in the region is taken into account, it is higher still. This means that at least 123,000 DC residents are living in poverty. With an unemployment rate that continues to soar, especially in DC's poorest areas (Wards 7 at 11.6%, Ward 8 at 17.7%), low-income residents struggle to make ends meet.

This need puts a strain on the nation's safety net services: the number of DC residents in need of food stamps rose to 146,065 in September 2013—an increase of nearly 61% since 2008 (Food Research and Action Center). The most vulnerable among us are victims of these economic forces as well. By 2009, one in three DC children was living below the poverty line (US Census). With 79,000 DC residents residing in “food deserts” (Elevation DC), the poor of DC often lack the most basic necessities needed to maintain health and wellness.

City Orchard was developed in order to help meet the demand from Bread for the City's clients for fresh fruits and vegetables. As fresh produce was prohibitively expensive for Bread for the City to purchase, we had developed a program called Glean for the City, which collected unused fresh produce from local farms and farmers markets. However, fresh fruit was rarely available through gleaning, and our clients were eager to have more fruit made available.

#### **Timeliness of Project**

Since 2009, Bread for the City has provided fresh produce collected by our Glean for the City project and distributed, free of charge, to our clients through our two food pantry locations in Northwest and Southeast. To date, our efforts have been responsible for the collection and distribution of over 400,000 lbs. of free, locally grown fresh produce. However, we weren't fully meeting the need for vegetables or, more importantly, for fruit. When the opportunity to partner with the University of the District of Columbia and the USDA arose, we took it, with the aim of improving our clients' health through increased produce access and education.

City Orchard's primary objectives are the following:

- 1) Grow, harvest and distribute 45,000 lbs. of quasi-organic produce per year (at full production) to DC's low-income population.
- 2) Employ orchard as a backdrop for Bread for the City's nutrition education activities, which encourage clients of all ages to consume more fresh produce, and teaches them how to grow fresh produce of their own.
- 3) Utilize orchard as replicable model for which area DC residents (and beyond) can learn how to install and maintain quasi-organic specialty crop fruit trees/orchards of their own.

Bread for the City's commitment to City Orchard grew out of our existing rooftop gardens, which we had begun to develop in 2011. These projects have been successful at engaging clients, creating opportunities for education around nutrition and urban agriculture, and increasing the visibility of our efforts to reduce disparities in access to produce across DC. City Orchard was designed to help further our efforts to engage our client community as we press forward with new healthy lifestyle, nutrition and gardening activities/projects.

### **Previous Funding**

City Orchard is a brand new project that was developed as a result of the start-up funding received through the USDA's Specialty Crop Block Grant Program.

### **III. Project Approach:**

#### **Summary of Activities**

Since we were awarded the start-up grant in 2011, City Orchard has completed numerous goals. City Orchard activities have included, but are not limited to, the following: orchard layout and soil preparation, irrigation installation, fence repair, trellis construction, drip installation, spraying, trap laying, re-grading the land for drainage, harvesting, pruning, equipment repair, supply ordering, research, consulting other organic farmers, securing vendor relationships, spacing plots and plants, general repairs, and, more recently, harvesting vegetables and fruit with the help of numerous volunteer groups.

Initial installation in April 2012 was an event involving the large scale training of volunteers, and research on the planting process. We consulted with Casey Trees -- a local nonprofit dedicated to restoring the tree canopy of DC -- to plan these initial events. With 50 volunteers (including 20 Bread employees) and 20 Casey Trees staffers, we planted the first few hundred trees. During this initial weekend of work, the Casey Trees staff trained the BFTC employees on detailed bare-root tree planting instructions. Two weeks later, Bread staffers led 100 volunteers in large scale planting effort. Between these two events, we were able to install all of our saplings and related crops. Purple Mountain Organics, BFTC's farm maintenance contractor, supervised and provided quality control and technical assistance.

Soil amending was required for the land as well -- a process which involved adding organic compost and fertilizer to a clay heavy soil base, and tilling it into soil to improve consistency and composition. Acidity was also tracked by our pest management expert, and amendments were added when needed. We had to amend the different patches in different ways. Blueberries need a very different environment than fruit trees. We consulted area growers to figure out the best methods for amending the soil. Soil amendments seemed to produce extremely healthy trees.

In regard to plant spacing, it was necessary to take into account equipment lanes, trellising posts, and ideal plant distance based on crop. Measure and marking holes/pre-auguring them before the volunteer planting.

For the next two years, City Orchard was the site of regular maintenance by BFC Food Program staff as well as Purple Mountain Organics, but the significant volunteer and staff effort dropped off as we waited for the orchard to mature. In summer 2014, activities once again increased with the first full growing and harvest season. From the City Orchard site, we harvested raspberries

and strawberries, apples, and Asian pears, for a total of 4,197 lbs of fruit from City Orchard. In addition, we were allowed to harvest vegetables such as sweet potatoes, peppers, squash and tomatoes from UDC land being managed under the 2012 grant, Specialty Crop Enhancement through Soil Productivity Research and Extension Education (12-25-B1491). From these research plots we harvested 10,113 lbs of vegetables. Ultimately, this first full season saw 14,310 lbs of produce harvested through the hard work of nearly 900 Bread for the City volunteers, clients, and community members.

Additionally, in November 2014 we completed the construction of a pavilion at City Orchard. The construction of this pavilion was funded by our great volunteer partner Washington Hebrew Congregation. The pavilion is designed as a gathering space for volunteer activities, workshops, and community engagement. We look forward to utilizing it fully in this way in the coming season.

### **Project Partners and Significant Contributions**

Nazirahk Amen and Purple Mountain Organics have provided invaluable technical support and agricultural expertise; including, but not limited to, heavy machine rental and operation, organic pest management, soil health improvement and fertilization, fence/trellising assistance, on the job training for Bread staffers and volunteers, vendor recommendations, cover crop selection/planting, extreme weather prep and recovery, nutrition education, and volunteer training/supervision.

Bill Marose of Marose Ag Consulting provided his skills with pest identification and trapping, integrated pest solutions and recommendations, soil testing and disease identification, orchard layout advice, and vendor recommendations.

The University of the District of Columbia provided land access, technical support, cooperative events coordination, storage space, and tool lending.

Casey Trees helped us with early planning and logistical coordination and provided us with volunteer training and tree planting expertise.

As noted above, Washington Hebrew Congregation has provided volunteer help and funding for the pavilion, which was constructed by Sandy Spring Builders and SmithGroupJJR.

## **IV. Goals and Outcomes Achieved**

### **Outcomes Achieved**

City Orchard has enjoyed a successful first full growing season in 2014. We maintained and harvested crops; engaged our client community through regular trips to the orchard; grew our base of volunteers through monthly “crop mobs”; strengthened our relationship with UDC and Purple Mountain Organics; and ultimately fed hundreds of low-income DC residents with fruits and vegetables grown at City Orchard and on Muirkirk.

With regards to long-term outcomes, the orchard enjoyed a mostly-healthy season. Given that City Orchard is managed without chemical pesticides, some pest problems are inevitable. This makes predicting output from year to year challenging. We expect the trees at City Orchard to

continue maturing over the winter season and to increase fruit yield as they grow older and sturdier. However, this may or may not happen – some years may have high yields of apples, pears, and persimmons, while some will not. We are cautious about predicting long-term outcomes that are dependent on the vagaries of pest and weather activities.

### **Actual Outcomes vs. Goals and Successful Outcomes Achieved**

It is very difficult to set accurate agricultural goals for a pilot project such as City Orchard. As such, in 2014 we experienced both significant successes related to our initial goals as well as some challenges in meeting the projections we set three years ago.

We expected to harvest ~40,000 lbs of produce from City Orchard once it hit maturity in 2014. Ultimately, we harvested just over 14,300 lbs of produce. The majority of this produce (10,113 lbs) came from USDA research plots established in 2012, through SCBGP 12-25-B-1491. This discrepancy between goal and actual outcome is due to several factors. First, the ongoing maturation process and the vagaries of disease and pests means that it is hard to predict what a full yield will be from year to year. It was also brought to our attention by our IPM contractor that since we acquired and planted most of the orchard and berry crops in the spring, these plants were most likely holdovers from the previous fall, which may have impacted their hardiness and contributed to the inconsistent state of health of the plants at the start of the project. Our yields were also impacted by crop loss and disease. For example, we lost our entire persimmon planting due to poor soil pH and low organic matter. This could account for up to a thousand pounds in the estimate.

Additionally, we experienced challenges with the strawberry crop. Contractors were vigilant in trapping/testing for spotted-wing drosophila, a fruit fly, but we had larger problems with fungal diseases like Strawberry Leaf Spot and Botrytis cinerea. These diseases significantly affected the shelf life of the strawberries set during early summer. BFC's Urban Agricultural Manager and staff implemented a strict hygienic program to wash clothing and bins between uses and separate moldy berries to cut down on spores. They also cleared out dead leaves 3-4 times per month. This helped greatly, and most of the harvested crop had a 3-4 day shelf life. Strawberries were also plagued with Strawberry Leaf Spot, which didn't seem to affect fruit production on healthy plants but may have affected the survival of weak plants. Ultimately, we will need to replace some of the strawberry plants in the next season in order to reach the same levels of production.

We also had difficulties with our blueberry crop, which we were unable to harvest from this year. Starting in early 2014, the IPM and maintenance contractors worked diligently to lower soil pH to within the acceptable range for blueberries, using such methods as applying several rounds of sulphur. We understood that it could be a while before we saw much change, but by spring 2014 we were still noticing poor foliage growth in nearly half of the plants. We had our contractor run soil tests on the foliage and soil for nutrient content, heavy metals and pH. The tests were inconclusive. It would be helpful to receive more information on UDC on any past pattern of sewage waste on the property as this hasn't been completely ruled out as a factor.

Ultimately, these challenges were one part of why we did not meet our initial goal of 40,000 lbs of fruit produced. Another part of this was miscommunication between UDC and Bread for the City as to orchard use. We observed, on at least three occasions, that UDC staff would lead tours of City Orchard and encourage their groups to take as much fruit as they wanted. One of these

groups included at least 50 people, many of whom harvested apples, so the amount harvested was significant. Because this fruit was taken by community members and not by Bread for the City staff, it was not properly measured and cannot be accounted for in our yields. In the future, better policy around who has permission to harvest from City Orchard would improve crop yield numbers through better record keeping and also ensure that City Orchard's full bounty goes to those for whom it is intended: Bread for the City clients in Washington, DC.

Moving on from yield numbers, our other two goals revolved around community engagement and education, and in these areas we are happy to announce that we far exceeded expectations. We expected to work with around 500 people at City Orchard in 2014. We far exceeded this goal and worked with nearly 900 people throughout the spring, summer, and fall. This has much to do with the success of our monthly "crop mob" programming, which was a Saturday, set aside each month, where any and all interested community groups, families, and corporate partners were invited to show up and help maintain the orchard and harvest the fruit. These events proved an efficient way to engage large groups of people, as well as get a lot of work done at the orchard.

These numbers include a significant number of client and community members from Bread for the City's base in DC. We were pleased this year to increase the educational opportunities available to our clients in the District. As our client population consists primarily of adult and elderly heads of household, as well as disabled individuals and families living below the poverty line, it can be hard for them to make it to Beltsville. Transportation issues, family responsibilities and the stress of worrying about finances all impact the ability of our clients to engage with City Orchard, even when they have the desire to participate. To address these issues, our Sustainable Agriculture Manager, who has extensive experience in client engagement, created several interventions to try to attract more clients to the Orchard and tailor educational opportunities to their needs and desires. For example, in October 2014, they were able to take a client group out to the Orchard for a full day meet-n-greet and learning opportunity in the orchard. In one day, clients got to tour the orchard, learn about cooking some of the specialty crops with Yao Afantchao, UDC Ethnic Crops Division Director, harvest fruits and vegetables and talk about what would make the space valuable to them. We consider this a successful intervention in getting more clients out to the orchard and will use it as a blueprint for future activities.

Another successful strategy has been collaborating with active client groups who gather in our service centers. Often, these groups have the time and interest in gardening that has been cultivated in their own, or in Bread for the City's Rooftop Gardens at our Southeast and Northwest DC facilities. Clients who have already identified as interested in the topic of urban agriculture are far more likely to actively participate at City Orchard.

## **V. Beneficiaries**

### **Groups That Benefit from Project**

The primary beneficiaries of City Orchard are Bread for the City's client population – low-income Washington, DC residents who either cannot afford or otherwise do not have regular access to fresh fruit resources.

### **Number of Beneficiaries Affected by Project Accomplishments**

884 volunteers participated in harvesting over 14,300 lbs of produce, which went to feed 5,720



Bread for the City clients in 2014.

## **VI. Lessons Learned**

### *Insights and Conclusion:*

The first full year of City Orchard has been one of enormous growth, learning, challenges, and joys. We are excited by the outpouring of support we enjoyed from our community: from events like the client retreat to the City Orchard ribbon cutting, to the five successful crop mobs we hosted for volunteers, the DC community has embraced City Orchard with enthusiasm. Through this process, we have learned that the people of the DC metro region are passionate about the issues of food justice, nutrition, and alleviating hunger, and that they appreciate meaningful opportunities to be involved in these efforts. We are confident that we can build on this established base of support next year.

### *Unexpected Outcomes and Results:*

We didn't expect to harvest as much from the UDC greenhouses and Purple Mountain Organics plots. The vegetables we were able to glean through these sources were so appreciated! Though this gleaning arrangement was informal, it was hugely beneficial to our clients, and for that we thankful to UDC.

An unexpected challenge was the lack of a key to the City Orchard and Muirkirk space. While we understand that liability issues and security concerns mean that access must be restricted in some ways, the fact that Bread for the City does not have a key meant that we were unable to confirm volunteer groups, hampering our efforts to cultivate a wide base of support for this project. We would love to be able to have a key to this space in 2015, as we expect that community engagement and education activities will happen even more frequently next year.

### *Lessons Learned (Positive and Negative) on Goals not Achieved:*

We learned both positive and negative lessons through the experience of not making our initial goal of 40,000 lbs harvested. Primarily, we need to establish better patterns of communication with UDC in order to come to a resolution regarding UDC staff and volunteers grazing at the orchard. This unrecorded produce was troubling on two levels: it through off our attempts at accurately counting the important inaugural yield, and it also was produce intended for our clients. Bread for the City's understanding is that the fruit from City Orchard is supposed to go to low-income DC residents only, and be tracked for research purposes. We would like to work with UDC in the coming months to put in place policies that are mutually beneficial and prevent this confusion in 2015.

On a positive level, we learned that hiring temporary staff during the harvest season was enormously important and allowed us to leverage more volunteer groups to get more lbs of produce harvested. We made every effort to recruit for these staff positions in a way that was inclusive and included those with non-traditional resumes or job experience, or those who lacked internet access, and we were incredibly pleased with the incredible (and incredibly hard-working!) staff that we had this summer. Without them, we couldn't have increased our educational and community engagement activities to the level that we did, or harvested as much produce as we did.

**VII. Contact Person(s) for Project**

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